



Subcommittee on Pure Water Southern
California and Regional Conveyance

Pure Water Southern California – Updated Cost-of-Service Allocations and Projected Rate Impacts

Item 3a.1
March 26, 2024

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PWSC Cost
Recovery
Alternatives

Subject

- Pure Water Southern California – Update on Cost-of-Service Allocations and Projected Rate Impacts

Purpose

- Based on the November 28, 2023 PWSC Phase 1 project cost estimate presented to the Subcommittee on PWSC and Regional Conveyance
 - (1) provide an update on the functional allocations for each of the cost recovery alternatives, and
 - (2) provide a projection of overall rate impact

PWSC Cost Recovery Allocations

Summary of Alternatives

Raftelis' Proposed Cost Recovery Alternatives

- | | | |
|---|---------------------------------------|--|
| 1 | Existing Rates and Charges | Capital and O&M costs are recovered on existing rate elements (Tier 1 Supply, SAR, RTS, CC) |
| 2 | Functionalized Fixed Charge | Capital costs are recovered on a new fixed charge.
O&M costs are recovered on T1 Supply and SAR |
| 3 | Members Subscribe as Direct Investors | Direct Investment → Participating MA
Indirect portion → MET rates & charges for all MA |

Additional Cost Recovery Alternatives

- | | | |
|---|-------------------------------------|---|
| 4 | PWSC Surcharges | PWSC costs are recovered on new, separate volumetric surcharges for supply and transportation |
| 5 | New GO Bond Ad-Valorem Property Tax | New GO Bond AV Tax for capital costs
O&M costs are recovered on T1 Supply and SAR |
| 6 | DPR and Recycled Surcharges | Recycled and DPR water costs that exceed revenue from such water are charged to surcharges that are allocated 100% to supply. |

Alternative 1: Existing Rates and Charges

Cost	Component	Previous Allocation % ⁽¹⁾	Updated Allocation % ⁽²⁾	Rate or Charge	Billing Basis
Capital Financing	Supply (Advanced Water Treatment (AWT))	52%	47%	T1 Supply (\$/AF)	Water Sales
	Transportation (Conveyance)	19%	20%	SAR (\$/AF)	All Transactions
		13%	19%	RTS	Existing RTS
		16%	14%	CC (\$/CFS)	Existing CC
O&M	Supply (AWT Power, Labor, Overhead)	67%	82%	T1 Supply (\$/AF)	Water Sales
	Transportation (Pumping Power, Labor, Overhead)	33%	18%	SAR (\$/AF)	All Transactions

(1) The allocation percentages when the project is completed and fully operational were estimated using the full program cost from the 2020 Regional Recycled Water Program White Paper No. 2.

(2) The updated allocation percentages when the project is completed and fully operational were estimated using the Phase 1 program cost presented at the November 28, 2023 Subcommittee on Pure Water Southern California and Regional Conveyance. The percentages are based on an average of the high and low contribution scenarios. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

Alternative 2: Functionalized Fixed Charge

Cost	Component	Previous Allocation % ⁽¹⁾	Updated Allocation % ⁽²⁾	Rate or Charge	Billing Basis
Capital Financing	Supply Portion (Advanced Water Treatment (AWT))	52%	47%	New Fixed Charge	10-Yr Avg Sales
	Transportation Portion (Conveyance)	48%	53%		10-Yr Avg Transactions
O&M	Supply (AWT Power, Labor, Overhead)	67%	82%	T1 Supply (\$/AF)	Water Sales
	Conveyance (Pumping Power, Labor, Overhead)	33%	18%	SAR (\$/AF)	All Transactions

(1) The allocation percentages when the project is completed and fully operational were estimated using the full program cost from the 2020 Regional Recycled Water Program White Paper No. 2.

(2) The updated allocation percentages when the project is completed and fully operational were estimated using the Phase 1 program cost presented at the November 28, 2023 Subcommittee on Pure Water Southern California and Regional Conveyance. The percentages are based on an average of the high and low contribution scenarios. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

Alternative 3: Members Subscribe as Direct Investors

Cost	Component	Cost Recover Mechanism
Direct Investment Portion	Portion of project subscribed by direct investors.	Fixed cost recovery in proportion to each investor's share of the project. Take-or-Pay contract.
Remaining Portion	Remaining project costs allocated to Member Agencies after subtracting the Direct Investment Portion.	Alternative 1 = Existing Rate Elements Alternative 2 = New Fixed Charge

- Updated allocations do not change the Direct Investment Portion of the project costs. Direct investors would pay in proportion to their share of the project.
- The Remaining Portion would be recovered either through Alternative 1 or Alternative 2. The update allocations were presented in two previous slides.

Alternative 4: PWSC Surcharges

Cost	Component	Previous Allocation % ⁽¹⁾	Updated Allocation % ⁽²⁾	Rate or Charge	Billing Basis
Capital Financing and O&M Costs	Supply – Advanced Water Treatment (AWT) and AWT Power, Labor, and Overhead	52%	47%	PWSC Supply Surcharge (\$/AF)	Water Sales
	Transportation – Distribution, Pumping System Power, Labor, and Overhead	48%	53%	PWSC Transportation Surcharge (\$/AF)	All Transactions

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(2) The updated allocation percentages when the project is completed and fully operational were estimated using the Phase 1 program cost presented at the November 28, 2023 Subcommittee on Pure Water Southern California and Regional Conveyance. The percentages are based on an average of the high and low contribution scenarios. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

Alternative 5: New GO Bond Ad-Valorem Property Tax

Cost	Component	Previous Allocation %(1)	Updated Allocation %(2)	Rate or Charge	Billing Basis
Capital Financing	Supply and Transportation	100%	100%	New GO AV Tax	AV Tax on properties within service area
O&M	AWT Power, Labor, Overhead	67%	82%	T1 Supply (\$/AF)	Water Sales
	Pumping System Power, Labor, Overhead	33%	18%	SAR (\$/AF)	All Transactions

(1) The allocation percentages when the project is completed and fully operational were estimated using the full program cost from the 2020 Regional Recycled Water Program White Paper No. 2.

(2) The updated allocation percentages when the project is completed and fully operational were estimated using the Phase 1 program cost presented at the November 28, 2023 Subcommittee on Pure Water Southern California and Regional Conveyance. The percentages are based on an average of the high and low contribution scenarios. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

Alternative Scenario 6

(Proposed by the FAIRP Committee Chair)

Cost	Component	Approx %	Rate or Charge	Billing Basis
Capital Financing and O&M Costs	Advanced Treated Recycled Water (100% to Supply)	78% (90mgd, Phase 1)	PWSC Recycled + PWSC Recycled Surcharge	PWSC Recycled Sales + New PWSC Recycled Surcharge
	Direct Potable Reuse Water (100% to Supply)	22% (25mgd; Phase 1)	PWSC DPR + PWSC DPR Surcharge	PWSC DPR Sales + New PWSC DPR Surcharge

- Updated allocation percentages for the cost-of-service functions do not change the surcharge allocations under Director Smith’s proposal, as they are allocated 100% to supply under all conditions.

PWSC Unit Cost Projections

Project and Financial Assumptions

Project Assumptions	
Project Start	2023
First Year Project Operational	2033 (10 years)
Design Capacity	115 MGD
Production Average Yield (assumed 92%)	118 TAF/yr
Engineering Fees & PM Fees	25% + 5%
Contingency - Capital	35%
Contingency – O&M	15%

Financial Assumptions	
Escalation Rate	4%
Discount Rate	4%
% PAYGO	0%
Debt Issuance	
Fixed Interest Rate	4.5%
Term	30 years
Cost of Issuance	0.5%
Bond Reserve	0%

PWSC Project Costs – Nov 2023 Update

PWSC – Phase 1	Low Contribution	Mid Contribution	High Contribution	units
Yield				
Design Capacity	115	115	115	mgd
Average Yield (92%)	118	118	118	TAF
Construction Duration	10	10	10	Years
Capital Cost				
Total Construction Costs	3,380	3,380	3,380	2023 \$M
Engineering (25%) and Program Mgmt Fees (5%)	1,014	1,014	1,014	2023 \$M
Total Capital Costs	4,394	4,394	4,394	2023 \$M
Contingency (35%)	1,538	1,538	1,538	2023 \$M
Community Benefit	457	457	457	2023 \$M
Less State / Federal Grants	(136)	(237)	(339)	2023 \$M
Less Partner Carried Costs	(1,662)	(2,074)	(2,487)	2023 \$M
Net MWD Capital Costs	4,590	4,077	3,563	2023 \$M
Annual Operations and Maintenance Cost⁽¹⁾				
Annual O&M ⁽¹⁾	228	228	228	2023 \$M/YR
Less Partner Carried Costs	(37)	(58)	(79)	2023 \$M/YR
Net Annual O&M Cost	191	170	149	2023 \$M/YR
Capital Financing				
Financing Term	30	30	30	Years
Interest Rate	4.50%	4.50%	4.50%	
Financing Cost	238	212	185	2023 \$M/YR
Annual Cost				
Financing Costs	238	212	185	2023 \$M/YR
O&M Costs	191	170	149	2023 \$M/YR
Total Annual Cost ⁽¹⁾	429	382	334	2023 \$M/YR

(1) When project fully operational, including 15% contingency

PWSC Project Unit Costs and Overall Rate Impact

Nov 2023 Update

PWSC – Phase 1	Low Contribution	Mid Contribution	High Contribution	units
Unit Cost				
Capital Costs	2,012	1,787	1,562	2023 \$/AF
O&M Cost	1,612	1,435	1,258	2023 \$/AF
Total Unit Cost	3,624	3,222	2,820	2023 \$/AF
Adv. Treatment Facilities (Supply)	2,338	2,005	1,672	2023 \$/AF
Conveyance & Recharges Facilities	1,285	1,216	1,148	2023 \$/AF
Total Unit Cost	3,624	3,222	2,820	2023 \$/AF
Cost Impact				
MWD Overall Cost Increase ^(1,2)	24%	22%	19%	
Annual cost increase ^(1,2,3)	2.7%	2.4%	2.1%	
Average Cost Increase per AF ^(1,4)	279	248	217	2023 \$/AF

(1) When project fully operational

(2) based on Metropolitan's 2023/24 Revenue Requirement of \$1,764 M

(3) based on construction duration less one year

(4) based on Metropolitan's 2023/24 Budget of 1.54 MAF

